

FURTHER NOTES ON THE NESTING HABITS OF THE VIRGINIA RAIL

BY HENRY MOUSLEY

SINCE the publication of my paper on the Virginia Rail (*Rallus limicola*) in the *Wilson Bulletin* of June 1937, I have had further opportunities of studying the incubation period of this rail, having watched daily three further nests from their construction to the subsequent hatching of the young. The first of these later nests was discovered in 1938, situated nearly opposite the 1936 nest, only on the opposite side of the marsh just seventeen yards away. It was a much smaller and prettier nest, well concealed in a tuft of fine sedges, and I was fortunate in finding it in the making. The first egg was laid on May 13, and an additional one on every succeeding day—except the twentieth, which was very wet—up to the twenty-second, when the ninth and last egg was deposited.

It has been rightly said that it is very difficult to flush a rail and see it fly for any distance. This was the case in 1936, for I never saw the bird fly at all, but had plenty of opportunities of watching it sneak from the nest and either remain nearby or vanish in the cattails. In the present case, however, the bird allowed a very close approach before springing off the nest and flying to the end of the marsh, giving me an uninterrupted view of its manner of flight. It was not until June 8, very near hatching time, that the parent refused to fly from the nest, flushing along the ground and remaining nearby. I was hoping to obtain pictures of the young on the following day, but at 9 A.M. the eggs were still unhatched. I waited until about 2 P.M. but as there were still no signs of the young I left and returned early the next morning, June 10. On my arrival, five young had already left the nest, and a few hours later the four remaining eggs had hatched out and these young had also gone. There were no empty shells left in the nest. During the incubation period, I never saw more than one parent at or near the nest, but when the young had appeared both of them were constantly in view, calling continually to the now scattered young.

Since the above was written I have been fortunate in again (1939) finding in adjacent cattail marshes two more nests in the making, thus giving me further opportunities of checking my previous findings. One nest I found on May 13, the first egg being laid on May 20, the ninth and last, on May 28. The first chick appeared on June 15, 18 days after the laying of the last egg. The second nest was located on May 18, the first egg being deposited on May 22, and the ninth and last, on May 30. The first chick appeared on June 17, thus again giving a period of 18 days from the laying of the last egg.

The site of these two last nests formed an interesting contrast. No. 1 was in an open spot in the cattails (Fig. 1), while No. 2 was in another cattail marsh but located in a tuft of rushes at the foot of some willow bushes on the extreme edge of the marsh. As in the case of the nests of 1936 and 1938, only one bird was ever seen at the site until the eggs began to hatch, but thereafter both parents were in evidence, running excitedly about the nest within arm's reach.

When I visited nest No. 1 on the morning of June 15, three young had already hatched and left. On the following morning, five of the remaining six eggs had also hatched out, and the young—with the exception of one which was just emerging—had left the nest. The one



Figure 1. Nest of Virginia Rail in open part of the marsh. May 30, 1939.

remaining egg was addled. I was most fortunate in the case of this last youngster in obtaining a photograph (Fig. 2), showing the egg tooth, black band across the bill, and best of all, the tiny claw at the outer digit of the wing. It has been stated that the bill of these little glossy greenish-black chicks is scarlet, or orange-red, but at least in the early chick stage, I have always found it to be pinkish-white crossed by a black band. No empty shells were found in the nest.

Upon my visit to nest No. 2 in the morning of June 17, seven young had hatched out and two of them were still in the nest. The two remaining eggs hatched out the following day and the young had left

the nest when I arrived. In all four cases, the young have hatched out within a period of 24 hours. This nest was well concealed by the convergence of the rushes and willow boughs over the top. The parents behaved in exactly the same manner as in the previous cases, and likewise, there were no empty shells found in the nest.

Examining the facts obtained in these five intensive studies, we may conclude that the average period between the laying of the last egg and the appearance of the first young is 18 days, and in the case of the last young, 19 days. The 1938 bird was first found on the nest on May 21, the day before the laying of the last egg. Neither of the two birds in 1939 was found on the nest until the day the last egg was laid.



Figure 2. Young and egg of Virginia Rail. June 16, 1939.

In the *Auk* for October 1937, Dr. L. H. Walkinshaw says: "The eggs are laid as a rule, one each day, and are pipped for about forty-eight hours before hatching and all hatch out within a period of twenty-four hours, as a rule, for incubation does not start until the day before, or upon the day the last egg is deposited. The incubation period is twenty days. The young can swim and walk about almost immediately." Although Dr. Walkinshaw's study extended over a period of fourteen years (1920-1934), during which time 44 nests were examined, it would appear from the detailed list that only two of these could be checked very closely, and upon these two, apparently, the incubation period of

20 days was based, the period at all other nests being estimated. As will be seen, most of the findings at my 5 carefully checked nests agree with those of Dr. Walkinshaw, except in regard to the incubation period, which I find to be 19 rather than 20 days.¹

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NOTES ON THE BIRDS OF KENTUCKY. By Alexander Wetmore, Proc. U.S. National Museum, 88, No. 3089, 1940: 529-574.

This is the third of a series of papers on birds of the east-central States based upon data and specimens obtained by field parties of the National Museum. The work in Kentucky was done in 1938 and covers 167 forms. As in the case of the reports on the West Virginia and Tennessee collections already published, the author includes also other Kentucky specimens which are deposited in the National Museum.

On the whole the avifauna of Kentucky has northern affinities, but in some ten species both northern and southern races occur in the State. In eight other species both eastern and western races were found, at least on migration. The House Wren, however, is the only species which is recorded as having different races breeding in the eastern and western sections of Kentucky.

Dr. Wetmore includes taxonomic notes on several species. He is not able to recognize more than two races of *Vireo griseus* in the east, and he follows Ridgway's disposition rather than the later arrangement of Todd or of Oberholser. The Red-eyed Vireo and the Bronzed Grackle are treated as full species, and the name *Quiscalus versicolor* is again upheld for the latter. Oberholser's recent divisions of the Redstart into two races is considered unwarranted, but the author agrees with Oberholser in separating a western subspecies of the Swamp Sparrow. Todd and Sutton's recently described *Penthestes carolinensis extimus* is accorded recognition. The eastern forms of *Passerculus* are critically reviewed in the light of the recent monograph of this group by Peters and Griscom, with most of whose conclusions the author is in agreement.

As in the reports on West Virginia and Tennessee no attempt has been made to review the literature of the State or to present a complete list of birds already recorded, but in view of the paucity of published information on the distribution of birds in Kentucky, the paper is a very worthwhile contribution to the avifauna of the eastern United States. Its value is the greater since no other systematic ornithologist has critically studied subspecific variation in this area. Dr. Wetmore's careful work is of considerable importance to local students as well as to those of wider interests.—P. Brodtkorb.

¹ I have read the note by Dr. H. B. Wood in this same number of the *Auk* (1937: 535-6) but I am afraid it contains too many assumptions to warrant our accepting its conclusions as to the exact incubation period of the Virginia Rail. The nest was not visited between May 13 (5 eggs) and May 25, yet the author assumed that the last egg was laid on May 16. What if the bird had missed a day in laying an egg as did one of mine? Again, the nest was not seen after June 1 until June 3, when it was found destroyed with only cold eggs and dead embryos left. Yet it was upon the problematical date of hatching of these embryos that he arrives at the incubation period of 20 days!